



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
WASHINGTON, D. C. 20460

January 27, 2004

OFFICE OF
SOLID WASTE AND EMERGENCY
RESPONSE

MEMORANDUM

SUBJECT: National Remedy Review Board Recommendations for the Hastings Ground Water (OU 14 - Former Blaine NAD) Superfund Site

FROM: Jo Ann Griffith, Chair
National Remedy Review Board

A handwritten signature in black ink, appearing to read "Jo Ann Griffith", is placed over the printed name and title.

TO: Cecilia Tapia, Director
Superfund Division, Region VII

Purpose:

The National Remedy Review Board (NRRB) has completed its review of the proposed cleanup action for the Hastings Ground Water (OU 14 - Former Blaine NAD) Superfund Site in Hastings, Nebraska. This memorandum documents the NRRB's advisory recommendations.

Context for NRRB Review:

The Administrator announced the NRRB as one of the October 1995 Superfund Administrative Reforms to help control response costs and promote consistent and cost-effective decisions. The NRRB furthers these goals by providing a cross-regional, management-level, "real time" review of high cost proposed response actions prior to their being issued for public comment. The board reviews all proposed cleanup actions that exceed its cost-based review criteria.

The NRRB evaluates the proposed actions for consistency with the National Oil and Hazardous Substances Pollution Contingency Plan (NCP) and relevant Superfund policy and guidance. It focuses on the nature and complexity of the site; health and environmental risks; the range of alternatives that address site risks; the quality and reasonableness of the cost estimates for alternatives; regional, state/tribal, and other stakeholder opinions on the proposed actions, and any other relevant factors.

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Generally, the NRRB makes advisory recommendations to the appropriate regional decision maker. The Region will then include these recommendations in the administrative record for the site, typically before it issues the proposed cleanup plan for public comment. While the Region is expected to give the board's recommendations substantial weight, other important factors, such as subsequent public comment or technical analyses of response options, may influence the final regional decision. The board expects the regional decision maker to respond in writing to its recommendations within a reasonable period of time, noting in particular how the recommendations influenced the proposed cleanup decision, including any effect on the estimated cost of the action. It is important to remember that the NRRB does not change the Agency's current delegations or alter in any way the public's role in site decisions.

Overview of the Proposed Action:

The former Blaine Naval Ammunition Depot (Blaine NAD) occupies 48,000 acres east of Hastings, Nebraska. This site is one of many sub-areas that comprise the Hastings Ground Water Superfund Site. The Blaine NAD was an active load, assemble, and pack ammunition facility during World War II, and the Korean Conflict. The ground water underneath the site is contaminated with a variety of volatile organic compounds and explosive contaminants. The Blaine NAD Proposed Action designated, Operable Unit 14, is the final action for the ground water. The Region's preferred alternative as presented to the Board is to hydraulically contain the contaminated ground water until cleanup goals are met and offer the water to a local utility for use in a power generation facility.

NRRB Advisory Recommendations:

The NRRB reviewed the information package describing this proposal and discussed related issues with Mr. Gene Gunn, Mr. Robert Koke, of your office, and Mr. Steve Kemp, Nebraska Department of Environmental Quality on January 21-22, 2004. Based on this review and discussion, the Board offers the following comments:

1. The Board package indicated that the air sparging pilot study was so effective that the technology was employed for long term operation under a removal action at another Operable Unit. Yet air sparging and other in-situ technologies that looked technically feasible were eliminated from further consideration. The Region indicated at the meeting however that there were technical limitations and prohibitive costs associated with these in-situ technologies. The Board recommends that the decision documents better describe why these technologies were not retained for further evaluation.
2. The Board package provided no information concerning the potential presence of non-aqueous phase liquid (NAPL) contaminants in the ground water system. The presence of NAPL could significantly change the estimated efficiency and time to attain the RAOs for the remedies considered. Therefore, the Board, recommends that the Region review existing data, consider whether additional investigation is necessary, and document either the data indicating that NAPL is not and could not be present as a source of contamination to the aquifer or document how the proposed remedy does consider the

presence of NAPL and its ramifications on remedy selection. If NAPL is present, the Board also recommends that the design incorporate that information.

3. Insufficient information was presented to the Board concerning perchlorate and 1,4-dioxane. In regard to perchlorate, the Board was informed that the only well **not sampled** for perchlorate was the well near the rocket test area where one would most likely expect to find it. The Board understands that sampling for 1,4-dioxane, often a stabilizer in 1,1,1-TCA which is a site-related contaminant, was not done. The presence of either of these contaminants has the potential to significantly affect the remedy as neither is removed from water using the proposed treatment technologies. Therefore, an additional form of treatment may be required before the water could be used at the planned power plant. The Board recommends that before the Proposed Plan is released that the ground water in the rocket test area be sampled for perchlorate, and a number of wells in areas with significant 1,1,1-TCA contamination be sampled for 1,4-dioxane.
4. The Board notes that the pumping rates evaluated for Alternatives 2 and 3 are very similar (4050 gpm vs. 4140 gpm). However, Alternative 3 has twice as many pumping wells as Alternative 2, without a considerable reduction to the overall restoration time-frame. With double the number of wells, the Board would have expected a higher pumping rate and a shorter cleanup time. There was no information presented to the Board to indicate whether these alternatives were optimized for cleanup time. The Board recommends that additional extraction well configurations and pumping rates which optimize cleanup time-frame be evaluated, which may also lead to cost savings.
5. The Board notes that the package did not include any recent data on plume expansion rates. Data on plume expansion rates, based on recent monitoring data, should be considered and may be used to update modeling results. This information can be very useful in investigating the effectiveness of source control, and in comparing alternatives and designing more cost-effective remedies. The Board recommends that the results of this analysis be incorporated into the description of the alternatives in the decision documents.
6. The Board notes that an alternative that evaluated aggressive preferential pumping of hot spots without edge-of-plume pumping was not included. Such an alternative may present cost advantages or reduced cleanup time-frames and should be evaluated.
7. Alternative 4 - "Focused Remediation" was screened out and not carried through for detailed evaluation. The Board package did not include an adequate rationale for this action. During the meeting, the Region explained that the alternative did not reflect a "hot spot" cleanup approach, as suggested by the "focused remediation" name/description. The Board recommends that, if Alternative 4 is presented in the decision documents, the purpose and goals of this alternative be more clearly and accurately described.
8. The Board notes that the briefing package did not fully address the vertical extent of ground water impacted by VOCs and explosives, nor did the package address the

competency of the confining unit underlying layer 6 of the stratigraphic model. Additionally, the conceptual design for the ground water recovery wells specified screened intervals with little technical explanation. The decision documents should clarify how the extraction well screen intervals are correlated to depth of contamination observed in the various ground water plumes.

9. The package presented to the Board indicated that surface water discharge would be used for the treated RDX stream if it is not acceptable for use at the power plant. Also, surface discharge of the VOC and RDX plumes are indicated if the power plant is not upgraded. The Region and State indicated at the meeting that beneficial use of water is important in this area. The Board recommends that an evaluation be made for allowing other beneficial uses for the treated water.
10. The supplemental cost details provided to the Board identify contingencies of 50% for direct and indirect costs and 25% for operational and maintenance costs. The source referenced in the documentation indicates that these percentages are from past experience and best engineering judgment. Since the resulting contingency costs are significant with respect to the total costs of each alternative, the Board recommends that additional detailed justification be provided for these assumed percentages.
11. The package presented to the Board may have incorrectly identified “principal threat” wastes. Principal threats are those wastes that are highly toxic and mobile in the environment. Generally, ground water is not considered a principal threat unless NAPL is present. The Board recommends that the Region clarify what are the principal and/or low-level threats in accordance with OSWER Directive 9380.3-06FS, “A Guide to Principal Threat and Low-Level Threat Wastes.”

Follow-Up to NRRB Findings:

The NRRB appreciates the Region’s efforts in working together with the Potentially Responsible Parties, State, and Community Groups at this site. **We ask that a response be submitted in draft when the draft Proposed Plan is sent to your OSRTI Regional Support Branch for review.** Region VII management and staff should work with their regional NRRB representative and OSRTI to discuss any appropriate followup action. A final response should be made part of the Site’s Administrative Record at the time of the Proposed Plan release. At that time, a copy of this letter will be posted on the Remedy Review Board website. We will work with your staff on timing the release of this letter.

Thank you for your support and the support of your managers and staff in preparing for this review. Please call me at (703) 603-8774 should you have any questions.

cc: M. Cook (OSRTI)
E. Southerland (OSRTI)
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D. Lopez, Regions 3,4,5,7,8 Branch, OSRTI
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